

# REPORT ON OIL ENGINE MACHINERY.

No. NWE 441

Received at London Office

7 AUG 1947

Report 19... When handed in at Local Office 19... Port of Hamburg.  
Screw vessel held at Hamburg Date, First Survey 31 - 1 - 46 Last Survey 18/7 19 47  
Number of Visits 34  
Single Triple Screw vessel "EMPIRE MOWDDACH" (ex Pontos) Tons (Gross) 3703  
(Net) -  
By whom built Bremer Vulkan Yard No. 716 When built -  
By whom made Bremer Vulkan Engine No. - When made -  
By whom made - Boiler No. - When made -  
Owners Elders and Fyffes, Ltd. Port belonging to London  
Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes  
Carriage of Refrigerated Cargoes. Yes

Type of Engines M.A.N. D5Zu 60/90 airless injection 2 or 4 stroke cycle 2 Single or double acting double  
Pressure in cylinders 4.8 kg/cm<sup>2</sup> upper 5 kg/cm<sup>2</sup> lower 4.5 kg/cm<sup>2</sup> Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5  
+ 1 scavenge air pump  
Is there a bearing between each crank Yes  
Flywheel dia. 290 mm Weight - Means of ignition solid inject Kind of fuel used Diesel oil  
dia. of journals 420 mm Crank pin dia. 418 mm Crank webs Mid. length breadth 560 mm Thickness parallel to axis solid  
Mid. length thickness 235 mm Thickness around eyehole crank shaft  
Intermediate Shafts, diameter 390 mm Thrust Shaft, diameter at collars 800 x 150 mm  
Screw Shaft, diameter 338 mm Is the tube shaft fitted with a continuous liner Yes  
Thickness in way of bushes inner 383 mm outer 381 mm Thickness between bushes 376 mm Is the after end of the liner made watertight in the Yes

Is the liner in more than one length are the junctions made by fusion through the whole thickness of the liner -  
If two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after -  
Length of bearing in Stern Bush next to and supporting propeller 1900 mm  
Pitch 1.165 3/8" No. of blades 4 Material Bronze whether moveable No Total developed surface 62.95 sq. feet

versing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of forced Thickens of cylinder liners 40 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes  
non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned Yes  
Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
Diameter - Stroke - Can one be overhauled while the other is at work -  
No. and size Two - Bilge and Ballast; Bilge 264 galls/min, Ballast 440 galls/min  
How driven electrically

Power Driven Lubricating Oil Pumps, including spare pump, No. and size one M.E. drive, 30 tons/hr, one stand by - 132 galls/min  
Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary tunnel well Yes  
In machinery spaces 4 of 80 m/m bore In pump room one of 80 m/m bore  
aft p. & s of 60 m/m, midships one of 60 m/m, forward one of 60 m/m

Power Pump Direct Suctions to the engine room bilges, No. and size One - 100 mm bore. 7 other @ 100 mm (1 Bilge pump 1 Ballast)  
Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction pipes in the machinery spaces led from easily accessible boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
Are they fitted with valves or cocks valves Are they fixed Yes  
Are the overboard discharges above or below the deep water line Above  
Are the blow off cocks fitted with a spigot and brass covering plate Yes

Combined O.F. filling and ballast Yes How are they protected Not protected - steel & Cast iron  
Have they been tested as per Rule Yes  
Are they accessible at all times Yes  
Is it fitted with a watertight door Yes worked from main deck level

Compressors, No. 2 No. of stages 2 diameters M.P. 95 mm L.P. 245 mm stroke 220 m/m driven by Diesel motor thro' clutch  
Hand compressor One No. of stages One diameters 45 mm stroke 70 mm driven by Hand  
Air Pumps, No. One diameter 2 - 54 11/32" stroke 28 11/32" driven by Main Engine  
No. Three - 6 cylinder Position Port side - Engine room, bottom platform

Ex 10/19/47

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**AIR RECEIVERS:**—Have they been made under survey..... State No. of report or certificate.....  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule..... Yes ✓  
 Can the internal surfaces of the receivers be examined and cleaned..... Yes ✓ Is a drain fitted at the lowest part of each receiver.....  
**Injection Air Receivers, No.**..... Cubic capacity of each..... Internal diameter..... thickness.....  
 Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....  
**Starting Air Receivers, No.** 2 ✓ Total cubic capacity 445 cuft Internal diameter..... thickness.....  
 Seamless, lap welded or riveted longitudinal joint riveted Material Steel Range of tensile strength..... Working pressure.....

**IS A DONKEY BOILER FITTED**..... If so, is a report now forwarded.....  
 Is the donkey boiler intended to be used for domestic purposes only.....  
**PLANS.** Are approved plans forwarded herewith for shafting..... Receivers..... Separate.....  
 (If not, state date of approval) ✓  
 Donkey boilers..... General pumping arrangements as fitted, yes ✓ Pumping arrangements in machinery space as fitted.....  
 Oil fuel burning arrangements.....

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied..... Yes ✓  
 State the principal additional spare gear supplied..... 3 top and one bottom cylinder covers.

~~The foregoing is a correct description,~~

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
 { During erection on board vessel - - - }  
 Total No. of visits.....

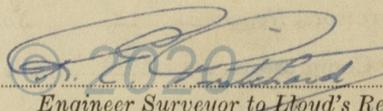
Dates of examination of principal parts—Cylinders..... Covers..... Pistons..... Rods..... Connecting.....  
 Crank shaft..... Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....  
 Screw shaft..... Propeller..... Stern tube..... Engine scatings..... Engine holding down bolts.....  
 Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working condition.....  
 Crank shaft, material..... Identification mark..... Flywheel shaft, material,..... Identification mark.....  
 Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification mark.....  
 Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....  
 Identification marks on air receivers.....

Is the flash point of the oil to be used over 150°F..... Yes ✓  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with..... Yes ✓  
 Description of fire extinguishing apparatus fitted In E.R. 4 patent foam type, one chemical type for switchboard and C.O. 2 and 3.....  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... No. ✓ If so, have the requirements of the Rules been complied with.....  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with.....  
 Is this machinery duplicate of a previous case..... Yes ✓ If so, state name of vessel "Empire Alde" (ex Pelikan)

**General Remarks** (State quality of workmanship, opinions as to class, &c.....  
 This vessel's main and auxiliary machinery has been examined in detail throughout, including all modifications to the pumping and ballast arrangements as indicated on Deutsche Werft Plan submitted for approval.  
 All parts were found to be or have now been placed in an efficient condition and have been examined under working conditions with satisfactory results.  
 It is submitted that this vessel's machinery is eligible to receive the Society's class in the Register's record of LMC 7,47.

The amount of Entry Fee LMC ... £ 172 : 10  
 Special ... .. £ : :  
 Donkey Boiler Fee... .. £ : :  
 Travelling Expenses (if any) £ : :

When applied for..... 19.....  
 When received..... 19.....

  
 Engineer Surveyor to Lloyd's Register



Lloyd's Register Foundation

OCT 3 1907

Assigned LMC 7,47 Oil Eng.  
 S (C.L) 3,47

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute